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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/695,324

10/27/2003

Brian L. Ganz

4867

7590

02/22/2005

John R. Ross, III
Ross Patent Law Office
P.O. Box 2138
Del Mar, CA 92014

EXAMINER

DASTOURI, MEHRDAD

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/695,324	GANZ ET AL.	
	Examiner	Art Unit	
	Mehrdad Dastouri	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/27/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 24 is objected for the following informalities:

Claim 24 is listed twice. Once as a dependent claim that is dependent upon Claim 14, and the second time as an independent claim. The independent Claim 24 through Claim 40 have been renumbered and examined as Claims 25-41. The dependent Claim 24 has been examined as the actual Claim 24.

2. Claims 5-8, 10, 13, 17, 18, 20, 23, 24, and 29, 30, 31, 32, 34, 37 and 41 (Renumbered Original Claims 28, 29, 30, 31, 33, 36 and 40, respectively) are objected for the following informalities:

The Components or Steps A), B) and C) recited to further limit these claims should be changed to E), F), G), appropriately as applicable, to avoid duplication because Components or Steps A), B), and C) have been already recited in the their corresponding independent claims. Claims 6, 8, 18, 30, 32 and 41 are dependent on Claims 5, 7, 17, 29, 31 and 40, respectively.

3. In Line 7 of Claims 1 and 40; Line 3 of Claims 5, 7, 29, 31 and 41; Lines 2 and 4 of Claim 13; Line 2 of Claims 17 and 24; and Line 4 of Claims 23 and 37, "a t least" should be corrected to "at least".

In Line 1 of Claim 4, "s aid i nspection" should be corrected to "said inspection".

In Line 2 of Claims 13 and 36, "h olds a t l east o ne micro-well p late, w herein s aid s tor age g antry c omprises a t" should be corrected to ""holds at least one micro-well plate, wherein said storage gantry comprises at".

In Line 1 of Claim 8, "a utomated" should be corrected to "automated".

Similarly, appropriate correction is required in Claims 14, 22, 38, 39 wherein an unnecessary blank spaces are included within the words.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-41 are rejected under the judicially created doctrine of double patenting over Claims 1-19 of U. S. Patent No. 6,148,878, and Claims 1-30 of U.S. Patent No.

6,360,792, since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as an automated storage and retrieval device for filling a plurality of microplates. The subject matter claimed in the instant application is a broader version of patent claims.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application, which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 9-11, 14, 15, 19-21, 25-27 and 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Reich et al. (hereinafter Reich), (U.S. 4,199,013).

Regarding Claim 1, Reich discloses an automated storage and comprising: retrieval device for trays holding subject matter, comprising:

A) a storage rack for storing a plurality of trays (Figure 4, stored Cassettes 12 containing Tubes 10 and Specimen Cups 11, which are stored on stage 13; Column 2, Lines 67-68, Column 3, Lines 1-4),

B) at least one automated machine (Figure 33, Bracket Assembly 33 and related accessories; Column 3, Lines 22-41),

C) a storage gantry for moving said plurality of trays between said storage rack, and said at least one automated machine (Figure 4, Stage 13, Track 20, movements in horizontal directions 25 and 26, and vertical directions 23 and 24; Column 3, Lines 5-21), and

D) at least one computer system programmed to control said storage gantry (Figure 3, Program Panel 160; Figure 14, Curve A; Column 10, Lines 13-18, Column 10, Lines 32-35) .

Regarding Claim 2, Reich further discloses the automated storage and retrieval device as in Claim 1 further comprising an access device, wherein said storage gantry moves said plurality of trays between said storage rack and said access device (Figures 2, 3 and 14; Column 3, Lines 5-21; Column 10, Lines 13-35).

Regarding Claim 3, Reich further discloses the automated storage and retrieval device as in Claim 1, wherein said at least one automated machine is an inspection device (Column 1, Lines 49-53; Column 2, Lines 44-66).

Regarding Claim 9, Reich further discloses the automated storage and retrieval device as in Claim 1, wherein said at least one automated machine is an automated

micro-well plate filling machine (Figure 4, Cassettes 12 containing Tubes 10 and Specimen Cups 11; Column 1, Lines 7-14; Column 2, Lines 30-43).

Regarding Claim 10, Reich further discloses the automated storage and retrieval device as in Claim 1, wherein said at least one automated machine comprises:

E) a micro-well plate filling assembly, comprising:

1. an indexing device (Figures 3, 4 and 14; Column 3, Lines 5-21; Column 10, Lines 13-54), and
2. a fill mechanism in communication with a media source and positioned to insert portions of said media into the empty micro-well plates (Figures 3-5; Column 2, Lines 67-68, Column 3, Lines 1-52), and

F) an automatic control unit programmed to cause said indexing device to move empty micro-well plates adjacent to said fill mechanism, and to cause said fill mechanism to inject media from said media source into wells in the micro-well plates (Figure 3, Program Panel 160; Figure 14, Curve A; Column 10, Lines 13-18, Column 10, Lines 32-35).

Regarding Claim 11, Reich further discloses the automated storage and retrieval device as in Claim 1, wherein said subject matter is solution inside at least one micro-well plate (Column 2, Lines 44-50; Column 12, Lines 37-52).

With regards to Claims 14 and 25, arguments analogous to those presented for Claim 1 are applicable to Claims 14 and 25.

With regards to Claims 15 and 26, arguments analogous to those presented for Claim 2 are applicable to Claims 15 and 26.

With regards to Claim 27, arguments analogous to those presented for Claim 3 are applicable to Claim 27.

With regards to Claims 19 and 33, arguments analogous to those presented for Claim 9 are applicable to Claims 19 and 33.

With regards to Claims 20 and 34, arguments analogous to those presented for Claim 10 are applicable to Claims 20 and 34.

With regards to Claims 21 and 35, arguments analogous to those presented for Claim 11 are applicable to Claims 21 and 35.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4, 12, 13, 16, 22, 23, 28, 36 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reich et al. (hereinafter Reich), (U.S. 4,199,013) in view of Rubin et al. (hereinafter Reich), (Minimal Intervention Robotic Protein Crystallization).

Regarding Claim 4, Reich further discloses the automated storage and retrieval device as in Claim 3, wherein said inspection device is a device for inspecting and classifying a plurality of samples for microchemical assays including separation of liquid and solid phases of the samples (Column 1, Lines 49-53; Column 2, Lines 44-66).

Reich does not explicitly disclose inspecting and classifying a plurality of microscopic crystals.

Rubin discloses a protein crystallization robotic system for inspecting and classifying a plurality of microscopic crystals (Figures 2, 4 and 5; Pages 158-160, Section 3).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Reich's invention in accordance with the teachings of Rubin to inspect and classify a plurality of microscopic crystals because it will expand the versatility of Reich's teachings of separating liquid and solid phases of the samples to include inspecting, handling, filling and classifying microscopic crystals.

With regards to Claim 16, arguments analogous to those presented for Claims 3 and 4 are applicable to Claim 16.

With regards to Claim 28, arguments analogous to those presented for Claim 4 are applicable to Claim 28.

Regarding Claim 12, Rubin discloses the automated storage and retrieval device as in Claim 11, wherein said at least one micro-well plate comprises a bar code, wherein said automated storage and retrieval device further comprises at least one bar code reader in communication with said at least one computer system (Page 159, Column 1).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Reich's invention in accordance with the teachings of Rubin to include a bar code reader in communication with said at least one computer

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system because it is a well known accessory routinely implemented for identifying components intended to be inspected or classified.

Regarding Claim 13, Reich discloses the automated storage and retrieval device as in Claim 1, wherein said plurality of trays holds at least one micro-well plate, wherein said storage gantry comprises at least one gripper, wherein said plurality of trays comprises:

A) at least one cut-down access area for said at least one gripper ,

B) a corner flat for tray orientation (Figure 4), and

C) a plurality of tapered guide pillars for guiding said at least one micro-well plate into said plurality of trays (Figures 1-4; Column 2, Lines 30-43).

Reich does not disclose a robotic gripper.

Utilizing a robotic gripper is well known in liquid sample delivering and handling systems as taught by Rubin (Figure 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Reich's invention in accordance with the teachings of Rubin to include a robotic gripper in the automated storage and retrieval device because it is a well known accessory routinely implemented for handling components intended to be inspected or classified.

With regards to Claims 22 and 36, arguments analogous to those presented for Claim 12 are applicable to Claims 22 and 36.

With regards to Claims 38-40, arguments analogous to those presented for Claims 1-4 are applicable to Claims 38-40.

With regards to Claims 23 and 37, arguments analogous to those presented for Claim 13 are applicable to Claims 23 and 37.

10. Claims 7 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reich et al., (hereinafter Reich), (U.S. 4,199,013) in view of Jurisica et al., (hereinafter Jurisica), (Intelligent Decision Support for Protein Crystal Growth).

Regarding claim 7, arguments analogous to those presented for Claims 1 and 10 are applicable to Claim 7. Reich further discloses a computerized program comprising:

B) an indexing device for receiving said plurality of trays and for placing said subject matter in a specified position for digital signal processing (Figures 3-5; Column 2, Lines 67-68, Column 3, Lines 1-52), and

C) at least one control computer programmed to control said indexing device (Program panel 160; Figure 14, Curve A; Column 10, Lines 13-18, Column 10, Lines 32-35), wherein said at least one control computer is programmed to receive digital signals from movement of said subject matter (Column 9, Lines 28-43).

However, Reich does not disclose the inspection device comprises:

at least one camera, and the control computer programmed to receive images of the subject matter.

Jurisica discloses protein crystal growth system comprising:

A) at least one camera (Page 396, Column 2, second paragraph),

B) an indexing device for receiving said plurality of trays and for placing said subject matter in camera view of said at least one camera (Page 396, Column 2, second paragraph), and

C) at least one control computer programmed to control said indexing device and said at least one camera, wherein said at least one control computer is programmed to receive from said at least one camera images of said subject matter (Figures 1 and 3-5; Page 398, Column 2 through Page 402, Column 1).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Reich's invention in accordance with the teachings of Jurisica to acquire images of the subject matter because it will provide supplementary information of the subject matter for further enhancing the operation of the automated storage and retrieval system.

With regards to Claim 31, arguments analogous to those presented for Claim 7 are applicable to Claim 31.

11. Claims 5, 6, 8, 17, 18, 24, 29, 30 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reich et al., (hereinafter Reich), (U.S. 4,199,013) in view of Rubin et al. (hereinafter Reich), (Minimal Intervention Robotic Protein Crystallization) and Jurisica et al., (hereinafter Jurisica), (Intelligent Decision Support for Protein Crystal Growth).

With regards to claim 5, arguments analogous to those presented for Claims 1-4 and 7 are applicable to Claim 5.

Regarding Claim 6, Jurisica further disclose the automated storage and retrieval device as in Claim 5, wherein said at least one control computer automatically classifies said plurality of microscopic crystals after receiving said images (Page 402).

Regarding Claim 8, it is a well known methodology to utilize LED light source for illuminating said subject matter (Official Notice).

With regards to Claim 17, arguments analogous to those presented for Claims 5 and 6 are applicable to Claim 17..

With regards to Claims 24 and 29, arguments analogous to those presented for Claim 5 are applicable to Claims 24 and 29.

With regards to Claims 18 and 30, arguments analogous to those presented for Claim 6 are applicable to Claims 18 and 30.

With regards to Claim 32, arguments analogous to those presented for Claim 8 are applicable to Claim 32.

With regards to Claim 41, arguments analogous to those presented for Claim 5 are applicable to Claim 41.

Other prior art cited

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,988,236 to Fawcett.

Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mehrdad Dastouri
Primary examiner
Art Unit 2623
February 17, 2005

MEHRDAD DASTOURI
PRIMARY EXAMINER

